

### REMARKS

This amendment is submitted in response to the Examiner's Action dated September 5, 2003. Applicants have amended the claims to more completely recite the novel features of Applicants' invention and place the claims in better condition for allowance. No new matter has been added, and the amendments are fully supported by the specification. Applicants respectfully request entry of the amendments to the claims. The arguments/discussion provided below to rebut claim rejections (and objections) reference the claims in their amended form.

### IN THE SPECIFICATION

At paragraph 1 of the Office Action, Examiner states that the disclosure is objected to as non-compliant with C.F.R. § 1.96(c). Specifically, Examiner objects on the basis that "the appendix exceeds 10 pages or 300 lines, and thus falls under Computer Program Listing Appendix on Compact Disc Requirement." Examiner further states that "[t]he description portion of this application contains a **computer program listing** consisting of more than three hundred (300) lines" (emphasis added).

While Applicant agrees that the appendix is more than 10 pages, that appendix is however not a computer program listing and cannot be classified as such. The appendix is titled Multidimensional Reed-Muller Codes, and the use of the term "codes" appears to have been misinterpreted by Examiner as a reference to computer code. However, a careful examination of the contents of the appendix will reveal that the appendix is not computer code and does not provide any computer code. Thus, the appendix does not fall under 37 C.F.R. 1.96(c), which only relates to "computer program listing."

At paragraph 1.1 of the Office Action, the disclosure is also objected to because page 7 does not include a reference to Numeral 22 of Figure 1. Accordingly, Applicants have amended the description of Figure 1 to include a reference to numeral 22. No new matter has been added, and Applicants respectfully request entry of the amendments to the specification and removal of the objection.

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**CLAIM OBJECTIONS**

At paragraph 2 of the Office Action, Claims 15 and 18 are objected to because of informalities. Applicants have amended these claims to correct any informalities contained therein. Applicants respectfully request removal of the objection to the claims.

**CLAIMS REJECTIONS UNDER 35 U.S.C. § 101**

At paragraph 3.1 of the Office Action, Claims 15-17 and 20-23 are rejected under 35 U.S.C. § 101. Applicants have amended these claims to overcome the §101 rejections. The present claims fall within statutory subject matter, and Applicants respectfully request reconsideration and removal of the §101 rejections.

**CLAIMS REJECTIONS UNDER 35 U.S.C. § 102**

At paragraph 4.1 of the Office Action, Claims 1-23 are rejected under 35 U.S.C. § 102(b) as being anticipated by Alamouti (U.S. Patent No. 5,784,417). Alamouti does not anticipate the above claims because Alamouti does not teach each feature recited by Applicants' claims.

Applicants' claims recite the following features:

(1) "a Trellis coder incorporated within ... (GPRS)-enabled terminal/device between an input/origination point for data being transmitted and an interleaving mechanism within a data transmission channel, ... substantially reduces signal power required for transmitting said data over a wireless channel";

(2) "a quadrature amplitude modulator that modulates said encoded data to increase a number of simultaneous transmissions within an allocated bandwidth, wherein Trellis Coded Modulation (TCM) is provided over Quadrature Amplitude Modulation (QAM) during a coding sequence;"

(3) "said Trellis coder includes both a Trellis encoder and a Trellis decoder that decodes encoded data received from a next system across said wireless channel;"

(4) "wherein said Trellis coder is located on an integrated circuit within a wireless component;" and

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(5) "wherein said wireless channel operates via Traffic Channel/Full Rate (TCH/F) to provide said data at a highest possible speed and capacity utilizing Trellis coding over the air link channel (PDTCH)."

Applicants have read the Alamouti reference and found that reference to be devoid of any teaching or suggestion of the above listed features. Alamouti provides a general description of a cyclic form of Trellis Coded Modulation (i.e., Cyclic Trellis Coded Modulation) and describes separate and very basic trellis encoder systems and decoder system. Alamouti does not provide a device and/or a specific network type within which the functionality of CTCM is utilized. The specific section of Alamouti cited by Examiner (col. 3, line 64 and onwards) describes use of a cyclic trellis encoder with a set of present states partitioned into subsets and which comprises a state transition table containing next state values for the encoder. This discussion of a CTCM is provided without any reference or suggestion of any practical implementation or application such as those provided by Applicants' claims (i.e., a wireless GPRS/EDGE system and devices associated therewith)

From a technical perspective, Alamouti only provides a theoretical discussion of the features of CTCM, unlike Applicants' claimed invention which provides a practical network structure and transmission device (or circuit configuration) within which a different trellis coding algorithm can be applied to enable certain synergistic benefits to GPRS-based wireless data transmission. Thus, Alamouti thus does not provide any of the actual implementation features recited by Applicants' claims.

Finally, absent Applicants' invention, it would not be clear to those skilled in the art in data communications to implement Alamouti's disclosure for a GPRS/network. Examiner asserts this conclusion at page 3 without providing any support for that assertion. Notably, the assertion is a §103 argument, and thus cannot be the basis for a §102 rejection.

The standard for a §102 rejection requires that the reference directly teach each element recited in the claims set forth within the invention. As clearly outlined above, Alamouti fails to meet this standard and therefore does not anticipate Applicants' invention. Applicants' claims are therefore allowable.

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**CONCLUSION**

Applicants have diligently responded to the Office Action by amending the specification and claims to overcome objections and rejections, and to more clearly present the key features of Applicants' claimed invention. Applicants have further explained why the claims are not anticipated by Alamouti. The amendments and arguments overcome the objections and §101 and §102 rejections. Applicants, therefore, respectfully request reconsideration of the rejections and issuance of a Notice of Allowance for all claims now pending.

Applicants also request the Examiner contact the undersigned attorney of record at (512) 542-2130 if such would further or expedite the prosecution of the present Application.

Respectfully submitted,



Eustace P. Isidore

*Registered with Limited Recognition (see attached)*

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Expires: May 8, 2004



Harry Moatz,  
Director of Enrollment and Discipline